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Display **GenBank**  Show 5  Send to  Hide:  Sequence  Lesser featuresRange: from **begin** to **end**  Reverse complemented strand Features:  SNP  STS  Refresh**1: NM\_032995**. Reports *Homo sapiens* Rho ...[gi:15011980]

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**LOCUS** NM\_032995 4258 bp mRNA linear PRI 17-NOV-2006  
**DEFINITION** Homo sapiens Rho guanine nucleotide exchange factor (GEF) 4  
**ACCESSION** (ARHGEF4), transcript variant 2, mRNA.  
**VERSION** NM\_032995  
**KEYWORDS** NM\_032995.1 GI:15011980  
**SOURCE**  
**ORGANISM** Homo sapiens (human)  
**Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Euarchontoglires; Primates; Haplorrhini; Catarrhini; Hominidae; Homo.**

**REFERENCE** 1 (bases 1 to 4258)  
**AUTHORS** Kawasaki,Y., Senda,T., Ishidate,T., Koyama,R., Morishita,T., Iwayama,Y., Higuchi,O. and Akiyama,T.  
**TITLE** Asef, a link between the tumor suppressor APC and G-protein signaling  
**JOURNAL** Science 289 (5482), 1194-1197 (2000)  
**PUBMED** 10947987  
**REFERENCE** 2 (bases 1 to 4258)  
**AUTHORS** Thiesen,S., Kubart,S., Ropers,H.H. and Nothwang,H.G.  
**TITLE** Isolation of two novel human RhoGEFs, ARHGEF3 and ARHGEF4, in 3p13-21 and 2q22  
**JOURNAL** Biochem. Biophys. Res. Commun. 273 (1), 364-369 (2000)  
**PUBMED** 10873612  
**COMMENT** REVIEWED REFSEQ: This record has been curated by NCBI staff. The reference sequence was derived from AB029035.1 and AF249745.1.

**Summary:** Rho GTPases play a fundamental role in numerous cellular processes that are initiated by extracellular stimuli that work through G protein coupled receptors. The encoded protein may form complex with G proteins and stimulate Rho-dependent signals. This protein is similar to rat collybistin protein. Alternative splicing of this gene generates two transcript variants which encode different isoforms. Also there is possibility for the usage of multiple polyadenylation sites for this gene.

**Transcript Variant:** This variant (2) has 591 additional bases in the coding region compared to variant 1. This causes the reading frame shift and an early termination. Isoform b encoded by this variant is thus 20 amino acids shorter than isoform a encoded by variant 1.

**COMPLETENESS:** full length.

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